

Consolidated list of up-regulated proteins expressed at different Cr (VI) concentrations at time points

Cr (VI) concentration	6 h	9 h	12 h	18 h	24 h	36 h
	ComA2 family protein	2-isopropylmalate synthase	50S ribosomal protein L36	1-(5-phosphoribosyl)-5-amino-4-imidazole-carboxylate carboxylase	23S rRNA (uracil-5-)-methyltransferase RumA	2-dehydropantoate 2-reductase
	choline transporter	50S ribosomal protein L28	NAD(P)H-dependent oxidoreductase	2-isopropylmalate synthase	ATP-dependent Clp protease ATP-binding subunit ClpX	50S ribosomal protein L33
	dihydrofolate reductase	50S ribosomal protein L33	dihydrofolate reductase	30S ribosomal protein S14	DNA polymerase III subunit alpha	CDP-glycerol--poly(glycerophosphate) glycerophosphotransferase
	hypothetical protein XA21_07930	ATP-dependent Clp protease ATP-binding subunit ClpX	hypothetical protein BSF33_09680	30S ribosomal protein S21	DNA polymerase III subunit gamma/tau	DNA polymerase III subunit gamma/tau
	methionine--tRNA ligase	ATPase	magnesium transporter CorA	4-aminobutyrate--2-oxoglutarate transaminase	DNA-binding response regulator	Glutamyl endopeptidase precursor, serine proteinase SspA
	pathogenicity island protein	DNA mismatch repair protein MutS	polysaccharide biosynthesis protein	ATP-dependent DNA helicase RecG	Ferredoxin-dependent glutamate synthase	GntR family transcriptional regulator

DNA polymerase III subunit alpha	recombination/mobilization protein (plasmid)	CDP-glycerol:glycerophosphate glycerophosphotransferase	GNAT family N-acetyltransferase	dihydroxy-acid dehydratase
GNAT family N-acetyltransferase	transposase A (plasmid)	D-ribose ABC transporter substrate-binding protein	Short-chain dehydrogenase/reductase SDR	glutamate synthase
HAD family hydrolase		DNA polymerase X family	Siderophore biosynthesis protein	hypothetical protein
NAD synthetase		GTP-binding protein	alkyl hydroperoxide reductase	hypothetical protein, partial
NAD-dependent succinate-semialdehyde dehydrogenase		HAD family hydrolase	amino acid ABC transporter permease	methionine ABC transporter substrate-binding protein
Short-chain dehydrogenase/reductase SDR		Mercuric ion reductase	beta-galactosidase	methionine--tRNA ligase
Uncharacterised protein		N-acetylmuramic acid-6-phosphate etherase	deoxyribose-phosphate aldolase	pathogenicity island protein
asparagine--tRNA ligase		NAD(P)H-dependent oxidoreductase	formyltetrahydrofolate deformylase	preprotein translocase subunit YajC
class II fumarate hydratase		Short-chain dehydrogenase/reductase SDR	glutamate ligase	sodium:proton antiporter
deoxyribose-phosphate aldolase		VOC family protein	lipase	sulfate adenylyltransferase

100 mg L-1

dihydrofolate
reductase

excinuclease ABC
subunit B

glutamate ligase

hsp90-like protein

hypothetical protein
AXY36_09940
hypothetical protein,
partial

lipoyl synthase

magnesium
transporter CorA
major facilitator
superfamily protein

mercuric reductase

methicillin resistance
protein
methionine--tRNA
ligase

nitroreductase

oxidoreductase

acetyl-CoA
carboxylase
carboxyltransferase
subunit alpha

alanine racemase

alkyl hydroperoxide
reductase

alpha,alpha-
phosphotrehalase

asparagine--tRNA
ligase

chorismate synthase

damage-inducible
protein CinA
dihydroorotate
dehydrogenase

elongation factor Ts

glutamate synthase
subunit alpha

hsp90-like protein

hypothetical protein
A4A82_06020

hypothetical protein
A4A82_09210

hypothetical protein
A4A82_13105

magnesium
transporter CorA

pathogenicity island
protein

phosphoglyceromuta
se

recombination/mobili
zation protein
(plasmid)

sulfate
adenylyltransferase

valine--tRNA ligase

transcriptional
regulator

universal stress
protein

preprotein
translocase subunit
YajC
proline:sodium
symporter PutP
succinate
dehydrogenase
sulfate
adenylyltransferase
tRNA uridine(34) 5-
carboxymethylamino
methyl synthesis
enzyme MnmG
urease subunit
gamma

hypothetical protein
AXY36_05920

hypothetical protein
AXY36_09360

hypothetical protein
AXY36_09955

hypothetical protein
BSF33_09455

hypothetical protein
RES11_06070

hypothetical protein
RES11_07055

hypothetical protein
UF66_0386

hypothetical protein
UF66_0831

hypothetical protein
XA21_08735

hypothetical protein
XA21_11195

hypothetical protein
XA21_11670

lysyl-tRNA

synthetase

multidrug ABC

transporter ATP-

binding protein

multidrug transporter

nicotinate
phosphoribosyltransf
erase
nitronate
monooxygenase
phosphogluconate
dehydrogenase
(NADP(+)-
dependent,
decarboxylating)
phosphoribosylamino
imidazolesuccinocar
boxamide synthase
proline:sodium
symporter PutP
putative resolvase
(plasmid)
pyruvate
decarboxylase
recombinase RmuC
recombination/mobili
zation protein
(plasmid)
restriction
endonuclease subunit
M
sodium-independent
anion transporter
sodium:proton
antiporter

				succinate-semialdehyde dehydrogenase (NADP(+)) sulfate adenylyltransferase tRNA (adenosine(37)-N6)-dimethylallyltransferase MiaA trehalose operon repressor		
	2,5-diketo-D-gluconic acid reductase	3-oxoacyl-ACP synthase	2-oxoglutarate dehydrogenase E1	1,4-dihydroxy-2-naphthoyl-CoA synthase	3-oxoacyl-ACP synthase	1,4-dihydroxy-2-naphthoyl-CoA synthase
	23S rRNA methylase (plasmid)	30S ribosomal protein S10	23S rRNA (adenine(2058)-N(6))-methyltransferase Erm(B)	2-deoxyribose-5-phosphate aldolase	30S ribosomal protein S10	2,3-bisphosphoglycerate-independent phosphoglycerate mutase
	2-isopropylmalate synthase	50S ribosomal protein L1	23S rRNA (uracil-5-)-methyltransferase RumA	2-oxoglutarate ferredoxin oxidoreductase subunit alpha	30S ribosomal protein S13	3-hexulose-6-phosphate synthase
	30S ribosomal protein S20	50S ribosomal protein L11	30S ribosomal protein S15	3-hexulose-6-phosphate synthase	30S ribosomal protein S16	30S ribosomal protein S11
	50S ribosomal protein L32	50S ribosomal protein L30	30S ribosomal protein S16	3-hydroxyacyl-CoA dehydrogenase	30S ribosomal protein S18	30S ribosomal protein S13

50S ribosomal protein L36	ABC transporter, ATP-binding protein	30S ribosomal protein S17	3-methyl-2-oxobutanoate hydroxymethyltransferase	30S ribosomal protein S19	30S ribosomal protein S15
acetoin utilization protein	ATP-dependent Zn metalloproteinase	30S ribosomal protein S19	3-oxoacyl-ACP synthase	30S ribosomal protein S3	30S ribosomal protein S16
antibiotic ABC transporter ATP-binding protein	DNA gyrase subunit A	30S ribosomal protein S20	3-oxoacyl-[acyl-carrier protein] reductase	30S ribosomal protein S4	30S ribosomal protein S20
arginine--tRNA ligase	DNA helicase	30S ribosomal protein S8	30S ribosomal protein S1	30S ribosomal protein S5	30S ribosomal protein S3
ATPase	DNA-directed RNA polymerase subunit beta'	50S ribosomal protein L10	30S ribosomal protein S10	30S ribosomal protein S6	30S ribosomal protein S4
bifunctional N-acetylglucosamine-1-phosphate uridylyltransferase/glucosamine-1-phosphate acetyltransferase	GTP-binding protein TypA	50S ribosomal protein L23	30S ribosomal protein S11	30S ribosomal protein S7	30S ribosomal protein S5
chloramphenicol acetyltransferase	Glutamyl endopeptidase precursor, serine proteinase SspA	50S ribosomal protein L27	30S ribosomal protein S13	30S ribosomal protein S8	30S ribosomal protein S7
chorismate synthase	PTS system N-acetylglucosamine-specific IIBC component	50S ribosomal protein L3	30S ribosomal protein S15	4-oxalocrotonate tautomerase	30S ribosomal protein S8

deoxyribose-phosphate aldolase	PolC-type DNA polymerase III	50S ribosomal protein L30	30S ribosomal protein S16	5'(3')-deoxyribonucleotidase	30S ribosomal protein S9
diacetyl reductase	Serine protease	50S ribosomal protein L31	30S ribosomal protein S18	50S ribosomal protein L1	50S ribosomal protein L1
D-lactate dehydrogenase	UDP-N-acetylglucosamine 1-carboxyvinyltransferase	50S ribosomal protein L33	30S ribosomal protein S19	50S ribosomal protein L10	50S ribosomal protein L10
DNA polymerase IV	UDP-N-acetylmuramoylalanyl-D-glutamyl-2, 6-diaminopimelate--D-alanyl-D-alanine ligase	8-amino-7-oxononanoate synthase	30S ribosomal protein S2	50S ribosomal protein L13	50S ribosomal protein L13
DNA polymerase X family	aminoglycoside acetyltransferase and aminoglycoside phosphotransferase (plasmid)	ATP synthase F0F1 subunit delta	30S ribosomal protein S3	50S ribosomal protein L14	50S ribosomal protein L16
Ferredoxin-dependent glutamate synthase	arsenate reductase	ATP-dependent Clp protease proteolytic subunit	30S ribosomal protein S4	50S ribosomal protein L17	50S ribosomal protein L17
glutamate synthase subunit alpha	beta-ketoacyl-[acyl-carrier-protein] synthase II	CDP-glycerol--poly(glycerophosphate) glycerophosphotransferase	30S ribosomal protein S5	50S ribosomal protein L18	50S ribosomal protein L18
glycerol phosphate lipoteichoic acid synthase	carbamoyl phosphate synthase large subunit	CTP synthetase	30S ribosomal protein S6	50S ribosomal protein L21	50S ribosomal protein L24

GNAT family N-acetyltransferase	cation:proton antiporter	D-alanine aminotransferase	30S ribosomal protein S7	50S ribosomal protein L22	50S ribosomal protein L25
GntR family transcriptional regulator	cell division protein FtsW	DNA-directed RNA polymerase subunit beta	30S ribosomal protein S8	50S ribosomal protein L24	50S ribosomal protein L27
HAD family hydrolase	cysteine synthase	NAD kinase	30S ribosomal protein S9	50S ribosomal protein L25	50S ribosomal protein L4
helicase-exonuclease AddAB subunit AddB	cytochrome aa3 quinol oxidase subunit II	Phosphate acetyltransferase	4-oxalocrotonate tautomerase	50S ribosomal protein L27	50S ribosomal protein L5
hypothetical protein	ferrichrome ABC transporter substrate-binding protein	RNA-binding protein S1	5'(3')-deoxyribonucleotidase	50S ribosomal protein L29	50S ribosomal protein L7/L12
hypothetical protein A4A82_12595	formate dehydrogenase accessory protein	RecX family transcriptional regulator	50S ribosomal protein L1	50S ribosomal protein L3	ABC transporter ATP-binding protein
hypothetical protein RES10_12085	fructose-bisphosphate aldolase	Translation elongation factor Ts	50S ribosomal protein L10	50S ribosomal protein L31	ATP synthase F0F1 subunit alpha
hypothetical protein UF66_0386	glycerol-3-phosphate dehydrogenase	UDP-N-acetyl-D-galactosamine dehydrogenase	50S ribosomal protein L13	50S ribosomal protein L33	ATP-dependent Clp protease proteolytic subunit
hypothetical protein UF66_0428	glycine cleavage system protein H	UDP-N-acetylglucosamine 1-carboxyvinyltransferase	50S ribosomal protein L15	50S ribosomal protein L4	ATP-dependent Zn metalloproteinase
hypothetical protein UF66_1428	glyoxalase	Universal stress protein family	50S ribosomal protein L17	50S ribosomal protein L5	D-alanine aminotransferase
hypothetical protein UF66_2233	hydroxymethylglutaryl-CoA synthase	aconitate hydratase	50S ribosomal protein L18	50S ribosomal protein L6	DNA gyrase subunit A

hypothetical protein XA21_10855	hypothetical protein (plasmid)	adenylate kinase	50S ribosomal protein L19	8-amino-7- oxononanoate synthase	DNA polymerase X family
hypothetical protein XA21_11705	hypothetical protein A4A82_06020	alanine racemase	50S ribosomal protein L21	ATP-dependent Clp protease proteolytic subunit	DNA starvation/stationary phase protection protein
hypothetical protein XA22_02880	hypothetical protein A4A82_10410	aldehyde dehydrogenase	50S ribosomal protein L22	ATP-dependent Zn metallopeptidase CDP-	DNA-binding protein
hypothetical protein XA22_11305	hypothetical protein A4A82_12170	alpha/beta hydrolase	50S ribosomal protein L23	glycerol:poly(glycero phosphate) glycerophosphotransf erase	DNA-binding response regulator
intracellular protease amidase	hypothetical protein AXY36_00580	aminoacyltransferase	50S ribosomal protein L24	CTP synthetase	DNA-directed RNA polymerase subunit alpha
MarR family transcriptional regulator	hypothetical protein AXY36_07260	bacillithiol biosynthesis cysteine- adding enzyme BshC	50S ribosomal protein L29	Cell division protein FtsK	DNA-directed RNA polymerase subunit beta
monooxygenase	hypothetical protein AXY36_09795	ornithine acetyltransferase/N- acetylglutamate synthase	50S ribosomal protein L3	D-alanine aminotransferase	DNA-directed RNA polymerase subunit beta'
multidrug transporter	hypothetical protein BSF33_00215	catabolite control protein A	50S ribosomal protein L4	D-ribose transporter subunit RbsB	F0F1 ATP synthase subunit beta
Nif3-like dinuclear metal center hexameric protein	hypothetical protein BSF33_10120	cell division protein FtsZ	50S ribosomal protein L5	DNA helicase	FMN reductase (NADPH)

non-canonical purine NTP pyrophosphatase	hypothetical protein BZ166_05325	cell division protein GpsB	50S ribosomal protein L6	DNA methyltransferase	Fe-S cluster assembly protein SufD
peptide chain release factor 2	inosine-5-monophosphate dehydrogenase	dephospho-CoA kinase	50S ribosomal protein L7/L12	DNA polymerase X family	GTPase ObgE
phosphopantothienoyl cysteine decarboxylase	malate dehydrogenase (acceptor)	dihydroxy-acid dehydratase	ABC transporter ATP-binding protein	DNA-directed RNA polymerase subunit alpha	LysR family transcriptional regulator
phosphopentomutase	methyltransferase	enoyl-ACP reductase	ABC transporter, ATP-binding protein	DNA-directed RNA polymerase subunit beta	NAD(P)H-dependent oxidoreductase
pyruvate decarboxylase	mobilization protein C (plasmid)	esterase	ATP synthase F0F1 subunit gamma	DNA-directed RNA polymerase subunit beta'	NADH dehydrogenase
recombination/mobilization protein (plasmid)	octanoyltransferase	ferritin	ATP-dependent DNA helicase	Domain of uncharacterised function (DUF334)	PTS glucose transporter subunit IIA
restriction endonuclease subunit S	peptidylprolyl isomerase	fructose-bisphosphate aldolase	CDP-glycerol:poly(glycerophosphate) glycerophosphotransferase	Fe-S cluster assembly ATPase SufC	Phosphate acetyltransferase
RNA-binding transcriptional accessory protein	proline dehydrogenase	gamma-aminobutyrate permease	CtsR family transcriptional regulator	Fe-S cluster assembly protein SufB	RecX family transcriptional regulator
Serine protease	pyridoxamine 5-phosphate oxidase	glucosamine-6-phosphate isomerase	D-alanine aminotransferase	Fe-S cluster assembly protein SufD	Serine protease

Short-chain dehydrogenase/reductase SDR	pyruvate decarboxylase	glucose-6-phosphate isomerase	D-alanyl-lipoteichoic acid biosynthesis protein DltD	GTP-binding protein TypA	Translation elongation factor Ts
sucrose-6-phosphate hydrolase	pyruvate dehydrogenase (acetyl-transferring) E1 component subunit alpha	glutamine-hydrolyzing GMP synthase	DNA gyrase subunit A	Phosphate acetyltransferase	UDP-N-acetyl-D-galactosamine dehydrogenase
sulfate adenylyltransferase	pyruvate kinase	glutamyl-tRNA amidotransferase	DNA primase	RecX family transcriptional regulator	UDP-N-acetylglucosamine 1-carboxyvinyltransferase
sulfite reductase	recombinase A	glutamyl-tRNA reductase	DNA-binding protein	UDP-N-acetyl-D-galactosamine dehydrogenase	UDP-glucose 4-epimerase
tail protein	recombination/mobilization protein (plasmid)	glutamyl-tRNA synthetase	DNA-damage repair protein	UDP-N-acetylglucosamine 1-carboxyvinyltransferase	acetate kinase
transporter	restriction endonuclease	glycerol dehydrogenase	DNA-directed RNA polymerase subunit beta	Urease beta subunit	aconitate hydratase
transporter associated domain protein	ribulose-phosphate 3-epimerase	glycerol-3-phosphate cytidylyltransferase	Fe-S cluster assembly ATPase SufC	adenylate kinase	acyl carrier protein
tRNA (adenosine(37)-N6)-dimethylallyltransferase MiaA	short-chain dehydrogenase	hydroxymethylpyrimidine/phosphomethylpyrimidine kinase	GTP cyclohydrolase FolE2	adenylosuccinate synthase	alkaline shock protein 23
urease subunit gamma	short-chain fatty acids transporter	hypothetical protein A4A82_03560	GTPase ObgE	aldo keto reductase	aminoacyltransferase

uroporphyrin-III methyltransferase	stage V sporulation protein G	hypothetical protein A4A82_06020	Holliday junction resolvase RecU	aminoacyltransferase	anti-anti-sigma factor
	succinyl-CoA:3-ketoacid-coenzyme A transferase subunit B	hypothetical protein A4A82_08725	NADH dehydrogenase	aminopeptidase	aspartyl/glutamyl-tRNA amidotransferase subunit A
	transaldolase	hypothetical protein A4A82_09265	NADH-dependent flavin oxidoreductase	anti-anti-sigma factor	beta-ketoacyl-[acyl-carrier-protein] synthase II
	transcription termination/antitermination protein NusG	hypothetical protein A4A82_11275	Na ⁺ /H ⁺ antiporter subunit D	anti-sigma B factor RsbW	branched-chain alpha-keto acid dehydrogenase subunit E2
	transcriptional repressor CodY	hypothetical protein A4A82_12595	PTS glucose transporter subunit IIA	aspartate alpha-decarboxylase	cell division protein FtsZ
	transketolase	hypothetical protein AXY36_01150	PTS mannose transporter subunit IIA	aspartate--tRNA ligase	cell division protein GpsB
	transposon DNA-invertase	hypothetical protein AXY36_06780	Putative cytosolic protein	aspartyl/glutamyl-tRNA amidotransferase subunit A	citrate synthase
	triose-phosphate isomerase	hypothetical protein AXY36_09715	RNA degradosome polyphosphate kinase	beta-ketoacyl-ACP reductase	cysteine synthase
	type I glyceraldehyde-3-phosphate dehydrogenase	hypothetical protein BSF33_00215	RepU (plasmid)	carbamate kinase	dihydrolipoyl dehydrogenase

ureidoglycolate dehydrogenase	hypothetical protein BSF33_00755	Repressor CsoR of the copZA operon	cell division protein FtsZ	dihydroxyacetone kinase subunit L
virulence factor	hypothetical protein BSF33_08575	Ribonuclease III family protein	cysteine desulfurase	elongation factor G
	hypothetical protein RES9_02285	Rrf2 family transcriptional regulator	cysteine--tRNA ligase	elongation factor P
	hypothetical protein UF66_2233	TIGR01440 family protein	cytidine deaminase	elongation factor Ts
	hypothetical protein XA21_07930	Type I restriction-modification system, DNA-methyltransferase subunit M	dephospho-CoA kinase	elongation factor Tu
	hypothetical protein XA22_10040	UDP-N-acetylglucosamine 1-carboxyvinyltransferase	elongation factor P	enolase
	inosine-5-monophosphate dehydrogenase	UDP-N-acetylmuramoylalanyl-D-glutamyl-2, 6-diaminopimelate--D-alanyl-D-alanine ligase	enoyl-ACP reductase	enoyl-ACP reductase
	inositol monophosphatase	UDP-glucose 4-epimerase	excinuclease ABC subunit A	formate dehydrogenase accessory protein
	iron ABC transporter substrate-binding protein	UTP-glucose-1-phosphate uridylyltransferase	fructose-bisphosphate aldolase	fructose-bisphosphate aldolase

isoprenyl transferase	Urease beta subunit	glucose-6-phosphate isomerase	general stress protein
malate dehydrogenase (acceptor)	[acyl-carrier-protein] S-malonyltransferase	glutamine-hydrolyzing GMP synthase	glucose-6-phosphate isomerase
manganese ABC transporter substrate-binding protein	acetyl-CoA acetyltransferase	glutamyl-tRNA amidotransferase	glutamine--fructose-6-phosphate aminotransferase
metal-dependent hydrolase	acetyltransferase	glyceraldehyde-3-phosphate dehydrogenase, partial	glutamyl-tRNA amidotransferase
molecular chaperone GrpE	addiction module antitoxin RelB	glycerol-3-phosphate dehydrogenase	glutamyl-tRNA synthetase
multidrug ABC transporter ATP-binding protein	adenylate kinase	glyoxalase	glycerol-3-phosphate cytidyltransferase
nitrate reductase	alanine--tRNA ligase	heptaprenyl pyrophosphate synthase subunit A	glycerol-3-phosphate dehydrogenase
peptidase	aldo/keto reductase	histidine--tRNA ligase	glycine C-acetyltransferase
peptidase M23	alkaline shock protein 23	hydroxymethylglutaryl-CoA synthase	glycine--tRNA ligase
peptidase M24	aminopeptidase	hydroxymethylpyrimidine/phosphomethylpyrimidine kinase	histidine ammonia-lyase
phage protein	anti-anti-sigma factor	hypothetical protein A4A82_03560	histidine kinase

200 mg L-1

phosphoglucosamine mutase	anti-sigma B factor RsbW	hypothetical protein A4A82_03720	hydroxymethylglutaryl-CoA synthase
putative transmembrane protein	antitermination protein NusB	hypothetical protein A4A82_09265	hydroxymethylpyrimidine/phosphomethylpyrimidine kinase
putative transporter	arginine--tRNA ligase	hypothetical protein A4A82_10890	hypothetical protein A4A82_01085
pyridoxamine 5-phosphate oxidase	aspartate alpha-decarboxylase	hypothetical protein AXY36_00580	hypothetical protein A4A82_02240
recombinase RecA	aspartate--tRNA ligase	hypothetical protein AXY36_01150	hypothetical protein A4A82_03560
recombinase RecB	bifunctional 5,10-methylene-tetrahydrofolate dehydrogenase/5,10-methylene-tetrahydrofolate cyclohydrolase	hypothetical protein AXY36_02580	hypothetical protein A4A82_04210
serine/threonine protein kinase	branched-chain alpha-keto acid dehydrogenase subunit E2	hypothetical protein AXY36_02715	hypothetical protein A4A82_06020
short-chain dehydrogenase	capsule biosynthesis protein CapA	hypothetical protein AXY36_05930	hypothetical protein A4A82_07220
single-stranded DNA-binding protein	cell division protein DivIVA	hypothetical protein AXY36_07260	hypothetical protein A4A82_08725
stage V sporulation protein G	cell-cycle regulation protein HIT	hypothetical protein AXY36_09715	hypothetical protein A4A82_09265
teichoic acid biosynthesis protein	citrate synthase	hypothetical protein AXY36_09795	hypothetical protein A4A82_11275

thiol reductase thioredoxin	class I fructose- biphosphate aldolase	hypothetical protein BSF33_00215	hypothetical protein AXY36_01150
thioredoxin	class II fumarate hydratase	hypothetical protein BSF33_00540	hypothetical protein AXY36_06600
transcription termination/antitermi nation protein NusG	co-chaperone GroES	hypothetical protein BSF33_04620	hypothetical protein BSF33_04470
transcriptional repressor CcpN	cold-shock protein	hypothetical protein BSF33_05765	hypothetical protein BSF33_08575
transposon DNA- invertase	cysteine synthase	hypothetical protein BSF33_13140	hypothetical protein BSF33_11000
trigger factor	cysteine--tRNA ligase	hypothetical protein RES9_02285	hypoxanthine phosphoribosyltransf erase
universal stress protein	dihydrofolate reductase	hypothetical protein XA22_13145	inosine-5- monophosphate dehydrogenase
uridylate kinase	dihydrolipoamide succinyltransferase	hypoxanthine phosphoribosyltransf erase	lipase
virulence factor	elongation factor G	imidazole glycerol phosphate synthase subunit HisH	malate:quinone oxidoreductase
	elongation factor P	lipid hydroperoxide peroxidase	malonyl CoA-acyl carrier protein transacylase
	elongation factor Tu	membrane protein	manganese ABC transporter substrate- binding protein

fructose-bisphosphate aldolase	metal-dependent hydrolase	molecular chaperone DnaK
glucose-6-phosphate isomerase	molecular chaperone DnaK	multidrug ABC transporter ATP-binding protein
glycine C-acetyltransferase	ornithine--oxo-acid transaminase	nucleoside-diphosphate kinase
glycine--tRNA ligase	peptidase	oligoribonuclease
heptaprenyl pyrophosphate synthase subunit A	peptidase M28	peptidase
histidine--tRNA ligase	phosphogluconate dehydrogenase (NADP(+)-dependent, decarboxylating)	permease
histidinol-phosphate aminotransferase	phosphoribosylformylglycinamidine synthase II	peroxiredoxin
hypothetical protein A4A82_02240	phosphotransacetylase	phosphoenolpyruvate-protein phosphotransferase
hypothetical protein A4A82_04790	putative N-carbamoyl-beta-alanine amidohydrolase	phosphoglycerate kinase
hypothetical protein A4A82_05255	putative transporter	phosphopantothenoyl cysteine decarboxylase

hypothetical protein A4A82_06335	pyruvate, phosphate dikinase	phosphopyruvate hydratase
hypothetical protein A4A82_07220	quinone oxidoreductase	putative phage/plasmid primase
hypothetical protein A4A82_08725	reactive intermediate/imine deaminase	putative transporter
hypothetical protein A4A82_08945	redox-regulated ATPase YchF	pyridoxamine 5- phosphate oxidase
hypothetical protein A4A82_09030	ribosomal protein L7Ae	pyruvate decarboxylase
hypothetical protein A4A82_09265	ribosome recycling factor	pyruvate dehydrogenase (acetyl-transferring) E1 component subunit alpha
hypothetical protein A4A82_10890	ribulose-phosphate 3- epimerase	pyruvate kinase
hypothetical protein AXY36_00580	scaffolding protein	pyruvate oxidase
hypothetical protein AXY36_01585	sodium-independent anion transporter	recombinase A
hypothetical protein AXY36_02415	stage V sporulation protein G	recombinase RecA
hypothetical protein AXY36_02580	thioredoxin-disulfide reductase	recombinase RecB
hypothetical protein AXY36_06600	threonine synthase	recombination/mobili zation protein (plasmid)

hypothetical protein AXY36_07245	transaldolase	redox-regulated ATPase YchF
hypothetical protein AXY36_09935	transcription termination/antitermi nation protein NusA	ribose-phosphate pyrophosphokinase
hypothetical protein BSF33_04620	transketolase	ribosome recycling factor
hypothetical protein BSF33_04630	translation initiation factor IF-1	serine/threonine protein kinase
hypothetical protein BSF33_05765	transposase	single-stranded DNA- binding protein
hypothetical protein RES10_10450	trigger factor	sodium-independent anion transporter
hypothetical protein RES11_04470	type I glyceraldehyde- 3-phosphate dehydrogenase	succinate dehydrogenase flavoprotein subunit
hypothetical protein RES11_09065	uridylate kinase	succinyl-CoA:3- ketoacid-coenzyme A transferase subunit B
hypothetical protein RES9_11625		teichoic acid biosynthesis protein F2
hypothetical protein UF66_0089		thiol reductase thioredoxin
hypothetical protein UF66_2291		transaldolase
hypothetical protein XA21_08605		transcriptional repressor CodY

hypothetical protein
XA21_11860
hypothetical protein
XA22_07340
inosine-5-
monophosphate
dehydrogenase
lipase
lipid hydroperoxide
peroxidase
malate
dehydrogenase
(acceptor)
malate:quinone
oxidoreductase
manganese-
dependent inorganic
pyrophosphatase
mannitol-1-
phosphate 5-
dehydrogenase
metal-dependent
hydrolase
methionine sulfoxide
reductase
molecular chaperone
DnaK
molecular chaperone
GrpE
molecular chaperone
Hsp33

transketolase
translation initiation
factor IF-1
transposon DNA-
invertase
trigger factor
triose-phosphate
isomerase
type I glutamate--
ammonia ligase
universal stress
protein UspA
uracil
phosphoribosyltransf
erase

monooxygenase
o-succinylbenzoate
synthase
ornithine--oxo-acid
aminotransferase
peptidase M28
permease
phage tail protein
phosphoenolpyruvate
synthase regulatory
protein
phosphoglucosamine
mutase
phosphoglyceromuta
se
phosphotransacetylase
polysaccharide
biosynthesis protein
preprotein
translocase subunit
YajC
primosomal protein
N'
putative DNA-
binding protein,
YbaB family
putative
phage/plasmid
primase

pyridoxamine 5-
phosphate oxidase
quinone
oxidoreductase
ribonuclease R
ribonucleotide-
diphosphate
reductase subunit
beta
ribosomal RNA
small subunit
methyltransferase H
ribosomal protein
L7Ae
ribosome biogenesis
GTPase Der
ribosome biogenesis
GTPase YqeH
ribosome recycling
factor
ribulose-phosphate 3-
epimerase
serine
hydroxymethyltransf
erase
sigma-54 modulation
protein
signal recognition
particle
stage V sporulation
protein G

succinate--CoA
ligase subunit beta
sulfurtransferase
FdhD
sulfite reductase
subunit beta

superoxide dismutase

tRNA uridine(34) 5-
carboxymethylamino
methyl synthesis
enzyme MnmG
thioredoxin
thymidylate kinase
thymidylate synthase
transaldolase
transcriptional
repressor CodY
transketolase
translation initiation
factor IF-1
translation initiation
factor IF-2
translation initiation
factor IF-3
transposon DNA-
invertase
trigger factor
two-component
response regulator,
LytR

				type I glutamate-- ammonia ligase type I glyceraldehyde- 3-phosphate dehydrogenase universal stress protein UspA uracil phosphoribosyltransf erase urease subunit alpha uridylate kinase valine--tRNA ligase		
	1,4-dihydroxy-2- naphthoyl-CoA synthase 2,3- bisphosphoglycerate- independent phosphoglycerate mutase 2,4-dienoyl-CoA reductase 2-deoxyribose-5- phosphate aldolase 2-oxoglutarate dehydrogenase E1	2-oxoglutarate ferredoxin oxidoreductase subunit alpha CTP synthetase alpha/beta hydrolase dephospho-CoA kinase metal-dependent hydrolase	histidine ammonia- lyase hypothetical protein A4A82_08960 hypothetical protein AXY36_09720 ribonuclease HII ring-cleaving dioxygenase	3-ketoacyl-CoA thiolase CoA-transferase DNA repair protein F0F1 ATP synthase subunit C FAD-dependent oxidoreductase	GTP pyrophosphokinase alpha/beta hydrolase ornithine acetyltransferase/N- acetylglutamate synthase hypothetical protein XA21_11670 parM protein	2-dehydro-3- deoxyphosphoglucon ate aldolase DNA primase Rrf2 family transcriptional regulator cobalt ABC transporter ATPase lipoate-protein ligase A

2-oxoglutarate ferredoxin oxidoreductase subunit alpha	peptidase	sodium:proton antiporter	Fis family transcriptional regulator	putative transcriptional regulator (plasmid)
23S rRNA (uracil-5-)-methyltransferase RumA	recombinase RecB	sulfate permease	GTP-binding protein TypA	spermidine/putrescine ABC transporter permease
3-hexulose-6-phosphate synthase	scaffolding protein		Homoserine dehydrogenase	succinyl-CoA:3-ketoacid-coenzyme A transferase subunit B
3-methyl-2-oxobutanoate hydroxymethyltransferase	tRNA methyltransferase		L-lactate dehydrogenase	sulfate permease
3-oxoacyl-[acyl-carrier protein] reductase			L-serine dehydratase, iron-sulfur-dependent subunit alpha	
30S ribosomal protein S1			Major myo-inositol transporter IolT	
30S ribosomal protein S11			MobA/MobL family protein	
30S ribosomal protein S15			PTS beta-glucoside transporter subunit IIBC	
30S ribosomal protein S19			RNA helicase	
30S ribosomal protein S2			RND transporter	

30S ribosomal protein S3	acyl-CoA dehydrogenase
30S ribosomal protein S5	aldehyde dehydrogenase family protein bifunctional
30S ribosomal protein S6	riboflavin kinase/FMN adenylyltransferase
30S ribosomal protein S7	damage-inducible protein DinB
5'(3')- deoxyribonucleotidas e	formate dehydrogenase
50S ribosomal protein L1	glutamate synthase
50S ribosomal protein L10	glycerophosphodiester phosphodiesterase
50S ribosomal protein L14	heme ABC transporter ATP- binding protein
50S ribosomal protein L15	hypothetical protein (plasmid)
50S ribosomal protein L19	hypothetical protein BSF33_09115
50S ribosomal protein L22	hypothetical protein RES9_02800
50S ribosomal protein L24	hypothetical protein XA22_13430

50S ribosomal
protein L25

50S ribosomal
protein L29

50S ribosomal
protein L30

50S ribosomal
protein L6

50S ribosomal
protein L7/L12

6-phosphogluconate
dehydrogenase

8-amino-7-
oxononanoate
synthase

ABC transporter
(plasmid)

ABC transporter
ATP-binding protein
ATP synthase F0F1
subunit B

ATP synthase F0F1
subunit alpha

ATP synthase F0F1
subunit delta

lactonase

nitric oxide reductase
activation protein
NorQ

peptidase M24

peptide chain release
factor 3

phenylalanine--tRNA
ligase subunit beta

phosphoenolpyruvate
carboxykinase [ATP]

phosphoglycerate
dehydrogenase

phosphopyruvate
hydratase

serine protease SplE

site-specific integrase

sporulation regulator
WhiA

teichoic acid
biosynthesis protein
B

ATP-dependent Clp
protease proteolytic
subunit
ATP-dependent
DNA helicase
ATP-dependent Zn
metallopeptidase
ArsR family
transcriptional
regulator
CDP-glycerol--
poly(glycerophosphat
e)
glycerophosphotransf
erase
CDP-
glycerol:poly(glycero
phosphate)
glycerophosphotransf
erase
CoA-transferase
D-alanine
aminotransferase
D-alanine--D-alanine
ligase
DNA gyrase subunit
A
DNA helicase
DNA polymerase III
subunit beta

thiamine-phosphate
pyrophosphorylase

transposase B

transcription
termination factor
Rho

type I methionyl
aminopeptidase

DNA-binding protein

DNA-directed RNA
polymerase subunit
beta

F0F1 ATP synthase
subunit beta

F0F1 ATP synthase
subunit epsilon

FAD-dependent
oxidoreductase

Fe-S cluster
assembly protein

SufB

Fis family
transcriptional
regulator

GTP cyclohydrolase

FolE2

GTP-binding protein

TypA

GTPase ObgE

IMP dehydrogenase

L-proline 3-
hydroxylase

Mobile element
protein

Molybdenum
cofactor biosynthesis
protein A

NAD-dependent
dehydratase
NADH
dehydrogenase
NADP-dependent
oxidoreductase
NIF3 protein
Oligoendopeptidase
F
Oligopeptide ABC
transporter,
periplasmic
oligopeptide-binding
protein OppA
PTS glucose
transporter subunit
IIA
PTS mannose
transporter subunit
IIA
PadR family
transcriptional
regulator
Phage lysin, N-
acetylmuramoyl-L-
alanine amidase
Phosphate
acetyltransferase
Replication-
associated protein

ThiJ/PfpI family
protein
Translation
elongation factor Ts
UDP-N-acetyl-D-
galactosamine
dehydrogenase
UDP-N-
acetylmuramate--
alanine ligase
UDP-N-
acetylmuramoylalany
l-D-glutamyl-2, 6-
diaminopimelate--D-
alanyl-D-alanine
ligase
UDP-glucose 4-
epimerase
Uncharacterised
protein
Urease beta subunit
YigZ family protein
[acyl-carrier-protein]
S-malonyltransferase

acetate kinase
acetyl-CoA
carboxylase biotin
carboxylase subunit
aconitate hydratase
acyl carrier protein

acyl-CoA
dehydrogenase
adenylate kinase
adenylosuccinate
synthase
alanine
dehydrogenase

alanine--tRNA ligase

alcohol
dehydrogenase
aldehyde
dehydrogenase
aldo/keto reductase
alkaline shock
protein 23
aminopeptidase
anthranilate synthase
component I

anti-anti-sigma factor

arginine repressor
arsenate reductase
aspartate alpha-
decarboxylase
aspartyl/glutamyl-
tRNA
amidotransferase
subunit A
beta-ketoacyl-ACP
reductase

beta-ketoacyl-[acyl-
carrier-protein]
synthase II
branched-chain alpha-
keto acid
dehydrogenase E1
branched-chain alpha-
keto acid
dehydrogenase
subunit E2
cadmium resistance
protein
cell division protein
DivIVA
cell division protein
FtsA
cell division protein
FtsZ
cell division protein
GpsB
chorismate mutase
citrate synthase
cysteine desulfurase
cysteine synthase
cysteine--tRNA
ligase
cytochrome aa3
quinol oxidase
subunit II
dehydrogenase
deoxycytidine kinase

300 mg L-1

dephospho-CoA
kinase
diaminopimelate
decarboxylase
dihydrolipoamide
succinyltransferase
dihydrolipoyl
dehydrogenase
dihydroxy-acid
dehydratase
dihydroxyacetone
kinase subunit L
elongation factor G
elongation factor P
elongation factor Tu
endopeptidase Clp
ATP-binding subunit
C
enolase

enoyl-ACP reductase

excinuclease ABC
subunit A
excinuclease ABC
subunit B
exported protein
ferrichrome ABC
transporter substrate-
binding protein
ferritin

formate--
tetrahydrofolate
ligase
fructose-
biphosphate
aldolase
general stress protein

glucosamine-6-
phosphate isomerase

glucose-6-phosphate
isomerase

glutamate
dehydrogenase
glutamate synthase
glutamate-1-
semialdehyde
aminotransferase
glutamine--fructose-
6-phosphate
aminotransferase
glutamine-
hydrolyzing GMP
synthase

glycerol-3-phosphate
cytidyltransferase

glycine C-
acetyltransferase

glycine cleavage
system protein T
glycine
dehydrogenase
glycine
dehydrogenase
subunit 2

glycine--tRNA ligase

glycine/betaine ABC
transporter permease

heme-binding protein

hsp90-like protein
hydroxymethylglutar
yl-CoA synthase
hydroxymethylpyrimi
dine/phosphomethylp
yrimidine kinase
hypothetical protein
A4A82_02240
hypothetical protein
A4A82_03560
hypothetical protein
A4A82_03720
hypothetical protein
A4A82_03930
hypothetical protein
A4A82_06020

hypothetical protein
A4A82_07220
hypothetical protein
A4A82_08945
hypothetical protein
A4A82_09030
hypothetical protein
A4A82_12170
hypothetical protein
A4A82_12600
hypothetical protein
AXY36_02415
hypothetical protein
AXY36_02580
hypothetical protein
AXY36_03305
hypothetical protein
AXY36_06600
hypothetical protein
AXY36_06780
hypothetical protein
BSF33_00215
hypothetical protein
BSF33_00755
hypothetical protein
BSF33_04620
hypothetical protein
BSF33_05765
hypothetical protein
BSF33_08575

hypothetical protein
BSF33_12980
hypothetical protein
BZ166_05325
hypothetical protein
RES10_10450
hypothetical protein
RES10_11420
hypothetical protein
RES11_04470
hypothetical protein
RES11_09065
hypothetical protein
RES9_02285
hypothetical protein
RES9_11625
hypothetical protein
UF66_1532
hypothetical protein
UF66_2021
hypothetical protein
XA21_11805
hypothetical protein
XA21_11860
hypothetical protein
XA21_13400
hypothetical protein
XA22_10040
hypoxanthine
phosphoribosyltransf
erase

iron ABC transporter
substrate-binding
protein
isoleucine--tRNA
ligase
isoleucyl-tRNA
synthetase, partial
lactate
dehydrogenase
late competence
protein ComEC
leucyl
aminopeptidase
lipid hydroperoxide
peroxidase
lipoate--protein
ligase
long-chain fatty acid--
CoA ligase
malate
dehydrogenase
malate:quinone
oxidoreductase
manganese ABC
transporter substrate-
binding protein
mannitol-1-
phosphate 5-
dehydrogenase
metal-dependent
hydrolase

methionine ABC
transporter substrate-
binding protein
methionine sulfoxide
reductase
molecular chaperone
DnaK
molecular chaperone
Hsp33
nitronate
monooxygenase
nuclease SbcCD
subunit C
nucleoside-
diphosphate kinase
oligoribonuclease
oxidoreductase
peptidase
peptidase M28
phosphoenolpyruvate
carboxykinase
phosphoenolpyruvate
synthase regulatory
protein
phosphoglycerate
kinase
phosphoglyceromuta
se
phosphonate ABC
transporter ATP-
binding protein

polynucleotide
phosphorylase
preprotein
translocase subunit
SecA
protein rlx
pseudouridine
synthase
putative DNA-
binding protein,
YbaB family
putative alpha-
acetolactate
decarboxylase
putative
phage/plasmid
primase
pyrimidine-
nucleoside
phosphorylase
pyruvate
dehydrogenase
(acetyl-transferring)
E1 component
subunit alpha
pyruvate oxidase
pyruvate, phosphate
dikinase
recombinase A
recombinase RecB
recombinase XerD

ribonuclease J
ribose-phosphate
pyrophosphokinase
ribosomal protein
L7Ae
ribosome biogenesis
GTPase Der
ribosome recycling
factor
ribulose-phosphate 3-
epimerase
scaffolding protein
serine
hydroxymethyltransf
erase
short-chain
dehydrogenase
sigma-54 modulation
protein
signal recognition
particle
succinate
dehydrogenase
flavoprotein subunit
succinate--CoA
ligase subunit alpha
succinate--CoA
ligase subunit beta
superoxide dismutase

teichoic acid
biosynthesis protein
thiol reductase
thioredoxin
thioredoxin
thioredoxin-disulfide
reductase
thymidine
phosphorylase
thymidylate kinase
transcription
elongation factor
GreA
transcriptional
repressor CodY
transketolase
translation initiation
factor IF-2
translation initiation
factor IF-3
transposase
trigger factor
two-component
response regulator,
LytR
type I glutamate--
ammonia ligase
type I methionyl
aminopeptidase
universal stress
protein UspA

	uracil phosphoribosyltransf erase uridylate kinase uroporphyrinogen decarboxylase virulence factor					
	50S ribosomal protein L28	gamma- aminobutyrate	50S ribosomal protein L32	30S ribosomal protein S17	50S ribosomal protein L11	30S ribosomal protein S17
	DNA polymerase III subunit alpha	glucokinase	DNA polymerase III subunit gamma/tau	50S ribosomal protein L11	50S ribosomal protein L23	30S ribosomal protein S19
	alkyl hydroperoxide reductase	hypothetical protein BSF33_00540	beta-ketoacyl-[acyl- carrier-protein] synthase II	50S ribosomal protein L14	50S ribosomal protein L30	30S ribosomal protein S2
	esterase	phosphotransacetylase	class I fructose- bisphosphate aldolase	50S ribosomal protein L30	6-phosphogluconate dehydrogenase	50S ribosomal protein L11
	multidrug ABC transporter ATP- binding protein		formate dehydrogenase accessory protein	6-phosphogluconate dehydrogenase	Glutamyl endopeptidase precursor, serine proteinase SspA	50S ribosomal protein L14
	nitroreductase			ABC transporter (plasmid)	NAD(P)-dependent oxidoreductase	50S ribosomal protein L15
	peptidase M23			ATP-dependent Clp protease ATP- binding subunit ClpX	beta-ketoacyl-[acyl- carrier-protein] synthase II	50S ribosomal protein L23

100 + 200 mg L-1	phosphogluconate dehydrogenase (NADP(+)- dependent, decarboxylating) sulfurtransferase FdhD	ATP-dependent Clp protease proteolytic subunit	glucokinase	50S ribosomal protein L3
		DNA methyltransferase	hsp90-like protein	50S ribosomal protein L30
		DNA-directed RNA polymerase subunit alpha	multidrug ABC transporter ATP- binding protein	50S ribosomal protein L6
		Ferredoxin- dependent glutamate synthase	phosphoglucosamine mutase	6-phosphogluconate dehydrogenase
		Glutamyl endopeptidase precursor, serine proteinase SspA	polysaccharide biosynthesis protein	ATP-dependent Clp protease ATP- binding subunit ClpX
		N-acetyltransferase	pyridoxamine 5- phosphate oxidase	deoxyribose- phosphate aldolase
		NAD(P)-dependent oxidoreductase	recombinase RecA	hypothetical protein RES9_02285
		cell division protein FtsA	transcription elongation factor GreA	lipid hydroperoxide peroxidase
		deoxyribose- phosphate aldolase		malate dehydrogenase (acceptor)
		glucokinase		phosphoglucosamine mutase
		hypothetical protein A4A82_12595		prephenate dehydrogenase

				hypothetical protein AXY36_08620		type I glyceraldehyde- 3-phosphate dehydrogenase
				methionine--tRNA ligase putative transporter teichoic acid biosynthesis protein transcription elongation factor GreA urease subunit gamma		
	1-pyrroline-5- carboxylate dehydrogenase	1,4-dihydroxy-2- naphthoyl-CoA synthase	DNA primase	30S ribosomal protein S20	1,4-dihydroxy-2- naphthoyl-CoA synthase	30S ribosomal protein S6
	2-oxoisovalerate dehydrogenase	5'(3')- deoxyribonucleotidas e	hypothetical protein RES9_02800	50S ribosomal protein L25	acyl carrier protein	5'- methylthioadenosine/ S- adenosylhomocystein e nucleosidase
	3-hydroxyacyl-CoA dehydrogenase	Oligoendopeptidase F	translation initiation factor IF-1	acetate--CoA ligase	hypothetical protein A4A82_08725	50S ribosomal protein L21
	30S ribosomal protein S10	acetate kinase		acyl carrier protein		50S ribosomal protein L29
	30S ribosomal protein S16	aldehyde dehydrogenase		adenylosuccinate synthase		50S ribosomal protein L31
	30S ribosomal protein S17	aminoacyltransferase		aldehyde dehydrogenase		50S ribosomal protein L36

30S ribosomal protein S18	aminopeptidase	arsenate reductase	cold-shock protein
30S ribosomal protein S9	enoyl-ACP reductase	aspartate aminotransferase	superoxide dismutase
4,4'-diaponeurosporenoate glycosyltransferase	glucose-6-phosphate isomerase	ATP-dependent Clp protease ATP-binding subunit ClpC	
50S ribosomal protein L18	glycerol kinase	D-alanine--D-alanine ligase	
50S ribosomal protein L21	hypothetical protein AXY36_04620	dihydroxy-acid dehydratase	
50S ribosomal protein L33	multidrug ABC transporter ATP-binding protein	DNA helicase	
50S ribosomal protein L4	oligoribonuclease	DNA starvation/stationary phase protection protein	
ATP synthase F0F1 subunit gamma	phosphoenolpyruvate-protein phosphotransferase	DNA-directed RNA polymerase subunit beta'	
ATP-dependent Clp protease ATP-binding subunit ClpX	preprotein translocase subunit SecA	excinuclease ABC subunit A	
DNA starvation/stationary phase protection protein	putative phage/plasmid primase	ferrichrome ABC transporter substrate-binding protein	

DNA-directed RNA
polymerase subunit beta'
Glutamyl
endopeptidase
precursor, serine
proteinase SspA
Lanthionine
biosynthesis protein
LanL
Major myo-inositol
transporter IolT
UDP-N-
acetylglucosamine 1-
carboxyvinyltransfer
ase
acetate--CoA ligase
acetyl-CoA
acetyltransferase
alanine racemase
aminoacyltransferase
autolysin
beta-galactosidase

pyruvate oxidase

Fe-S cluster
assembly protein
SufB

glutamate
dehydrogenase

glutamine
amidotransferase

glutamine--fructose-
6-phosphate
aminotransferase

glutamine-
hydrolyzing GMP
synthase

glutaryl-CoA
dehydrogenase

glycerol-3-phosphate
cytidyltransferase

glyoxalase
GTPase Era
hypothetical protein
A4A82_03560
hypothetical protein
AXY36_04520

**200 + 300 mg
L-1**

bifunctional 5,10-
methylene-
tetrahydrofolate
dehydrogenase/5,10-
methylene-
tetrahydrofolate
cyclohydrolase
catabolite control
protein A

catalase

class I fructose-
bisphosphate
aldolase
class II fumarate
hydratase

glucokinase

glutamyl-tRNA
synthetase
glutaryl-CoA
dehydrogenase

glycerol kinase

glycerol-3-phosphate
dehydrogenase

glyoxalase
hydroxyacid
dehydrogenase

hypothetical protein
BSF33_12980

intracellular protease
amidase
iron citrate ABC
transporter substrate-
binding protein

isoleucine--tRNA
ligase

long-chain fatty acid--
CoA ligase
NAD-dependent
dehydratase

NIF3 protein

peptidase

prolyl-tRNA
synthetase

protein rlx

pyruvate oxidase

recombinase RecA

hypothetical protein AXY36_00580	recombinase XerD
hypothetical protein AXY36_07855	RLX protein
hypothetical protein BSF33_00540	scaffolding protein
hypothetical protein BSF33_09115	short-chain dehydrogenase
isocitrate dehydrogenase	thiol reductase
magnesium transporter CorA	thioredoxin
malate dehydrogenase (acceptor)	thioredoxin-disulfide reductase
ornithine--oxo-acid aminotransferase	transcription termination/antitermi nation protein NusG
phosphoenolpyruvate- protein phosphotransferase	UDP-N- acetylmuramate-- alanine ligase
phosphotransacetylase	Uncharacterised protein
preprotein translocase subunit YajC	undecaprenyldiphospho- muramoylpentapeptide beta-N- acetylglucosaminyltransferase
	virulence factor

	pyridoxamine 5-phosphate oxidase pyruvate kinase single-stranded DNA-binding protein stage V sporulation protein G transaldolase transcriptional regulator triose-phosphate isomerase type I glyceraldehyde-3-phosphate dehydrogenase urease subunit alpha	
100 + 300 mg L-1	alkyl hydroperoxide reductase	3-hydroxy-3-methylglutaryl-CoA reductase epimerase esterase glycosyl transferase family 2 octanoyltransferase polyribonucleotide nucleotidyltransferase elongation factor Ts phosphopyruvate hydratase

				succinate dehydrogenase		
100 + 200 + 300 mg L-1	30S ribosomal protein S13	6-phosphogluconate dehydrogenase	elongation factor Ts	50S ribosomal protein L33	octanoyltransferase	30S ribosomal protein S10
	alpha/beta hydrolase	elongation factor Ts	NAD(P)-dependent oxidoreductase	autolysin	prephenate dehydrogenase	50S ribosomal protein L22
	asparagine--tRNA ligase	hypothetical protein	octanoyltransferase	cell division protein GpsB		NAD(P)-dependent oxidoreductase
	DNA methyltransferase	hypothetical protein RES9_02285	phosphopyruvate hydratase	enoyl-ACP reductase		octanoyltransferase
	DNA-directed RNA polymerase subunit alpha	NAD(P)-dependent oxidoreductase	prephenate dehydrogenase	hypothetical protein A4A82_03720		polysaccharide biosynthesis protein
	lysine--tRNA ligase	peptidase M23	sulfurtransferase FdhD	hypothetical protein AXY36_01150		
	manganese- dependent inorganic pyrophosphatase	phosphogluconate dehydrogenase (NADP(+)- dependent, decarboxylating)		hypothetical protein RES9_02285		
	NAD(P)-dependent oxidoreductase	prephenate dehydrogenase		prephenate dehydrogenase		
	octanoyltransferase	recombinase RecA		sulfurtransferase		
	phosphoglucosamine mutase					
	prephenate dehydrogenase					
	recombinase RecA					
	universal stress protein					